

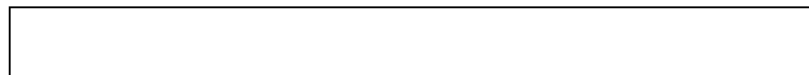
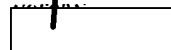
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Organizational Changes in Soviet Tank and Motorized Rifle Divisions, 1975-80



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Information through September 1980
was used in preparing this report.

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The author of this report is [redacted]. Comments and
queries are welcome at [redacted].

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**Organizational Changes in Soviet
Tank and Motorized Rifle Divisions,
1975-80** []

Overview

The Soviets are making equipment and organizational changes in their tank and motorized rifle divisions. These changes involve the combat, combat support, and service support units and affect both the capabilities and manpower of these divisions. They include the introduction of indirect fire artillery and an increase in infantry support to tank regiments, an increase in the number of armored personnel carriers in motorized rifle battalions, the addition of BMPs and medium tanks to reconnaissance battalions, and an increase in logistic lift capabilities. []

All of these modifications have been observed since late 1977 in the two experimental tank divisions at Belogorsk and Ovruch. Also, it appears that during the same time period several of these modifications were introduced and tested in a motorized rifle division in the Transbaikal Military District at Dauriya. Since late 1979 other tank and motorized rifle divisions have been observed with at least some of these modifications, indicating that some of these changes will be incorporated into all Soviet divisions within several years. []

The organizational structure of the two experimental divisions, [] in 1980, is probably the model toward which other Soviet tank divisions are evolving because these experimental divisions appear to have greater firepower potential and mobility. These new organizational structures provide Soviet tank and motorized rifle divisions with enhanced capabilities against prepared antitank defenses, streamline command and control, and lessen the regimental commander's dependence on divisional support. []

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Organizational Changes in Soviet Tank and Motorized Rifle Divisions, 1975-80

Introduction

This study is a comprehensive, [] examination of changes from 1975 through September 1980 in Soviet tank divisions (TDs) and motorized rifle divisions (MRDs). The current augmentation and reorganization trends in Soviet ground force divisions have intensified since at least late 1977. This is not, however, the first time that the Soviets have altered or increased the basic equipment and organization of their tank and motorized rifle divisions. In the early seventies the Soviets increased the number of tanks in the tank battalions of motorized rifle regiments (MRRs) from 31 to 40. During the same time period they increased artillery support in the MRRs by adding 12 howitzers to the six already held. These increases may have been prompted by Soviet analysis of the tactics used during the 1967 Arab-Israeli War. The changes were well established by 1975. []

In this paper divisions which still retain the 1975 Table of Organization and Equipment (TO&E) are considered to be standard divisions. All the modifications observed since 1975 have only been seen in the two experimental TDs at Belogorsk and Ovruch. Many similar changes have been observed in the altered MRD at Dauriya. The divisions which incorporate some of these changes we have identified as augmented divisions. Several papers have been published which examined the structure of the experimental TDs. [] Because the changes in these TDs were ongoing, however, the studies did not develop a TO&E for these two tank divisions. Also, none of the studies have specifically addressed the differences between the organization of the experimental TDs and that of the augmented tank and motorized rifle divisions. []

TO&Es as of 1975 were selected as standard because modifications of organization and equipment observed in the early seventies were completed by 1975 and those observed in the late seventies []

Discussion

The post-1975 modifications to Soviet divisions, like the earlier changes, involve increases in artillery assets at regimental level. However, unlike earlier changes, they affect the tank regiment to a much greater degree than the motorized rifle regiment. Many of the recent organizational changes involve the introduction of new models of equipment and weapons, some of which have greater firepower and lower manning requirements than earlier models. []

The Soviets have been experimenting with changes to the divisional structure of TDs at Belogorsk and Ovruch since 1977. This has been evident from equipment and organizational changes that have been occurring in the two divisions since that time. At least one MRD at Dauriya—which has served as a bellwether division for new equipment introductions and organizational changes—and possibly another at Odessa in the Odessa MD were either the first to incorporate or to experiment with similar TO&E changes in their organizational structure. Both MRDs have exhibited some characteristics of a new structure since 1978. No other tank or motorized rifle divisions were confirmed to have these changes in their TO&E until late 1979. Implementation of these new organizational concepts began by 1980. By September 1980 at least 17 other TDs and 18 other MRDs had been identified with one or more of the modifications.² These divisions are located throughout the Group of Forces in Europe, as well as in the western military districts, the military districts along the Sino-Soviet border, and in Afghanistan. In view of the widespread deployment and the increasing rate at which both tank and motorized rifle divisions are incorporating these changes, we expect that many of the modifications discussed in this report will be adopted by all Soviet divisions. []

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For the most part, the changes in the tank and motorized rifle divisions have resulted in increased indirect fire artillery support and infantry support to the tank regiments, thereby improving the maneuver unit's capabilities against prepared antitank defenses. Because much of this support is assigned at regimental level, the regimental commander is not as dependent on divisional support and overall divisional firepower is substantially increased. At the same time, however, the regimental commander's responsibilities for combined arms planning and maneuver are increased, imposing an additional burden on this level of command. [redacted]

Experimental Tank Divisions

The first of the post-1975 modifications to Soviet ground force divisions were identified in 1976, when BMPs were introduced into the reconnaissance battalions of MRDs. More extensive changes, however, were identified in late 1977 and early 1978 in the TDs at Belogorsk and Ovruch. At Belogorsk an MRD was converted to a TD organized into three tank regiments (TRs), a reinforced motorized rifle (MR) battalion, and artillery and air defense regiments with an altered structure, in addition to the normal divisional combat support and service support units. A similar reorganization of an existing TD was also identified at Ovruch. These changes were significant because of the elimination of the MRR and the inclusion of infantry and indirect fire artillery in the tank regiments. It appeared at that time to some analysts that the Soviets were experimenting with or adopting a combined arms division concept. Subsequent changes, however, showed that they had retained the basic MRD and TD structures. [redacted]

The new structure of the two tank divisions remained the same until 1979. After this one-year trial period, the MR battalion subordinate to each TD was expanded into an MRR, giving the divisions the same number of maneuver regiments as a standard TD. The structure of the regimental support units for the TRs of the experimental divisions

A TD at that time consisted of three TRs, an MRR, and support units. The three TRs contained little or no infantry support and no artillery assets.

remained virtually unchanged; however, the divisional combat support and service support units went through several changes. The reconnaissance battalion and artillery and air defense regiments all showed some alterations. In addition, the equipment in these divisions has continued to be modernized. New self-propelled (SP) artillery, rocket launchers, mortars, and tactical missile systems were introduced to replace or supplement existing systems. The experimental TDs now have the most modern weapons in the Soviet inventory and have a higher concentration of SP artillery than any other Soviet division, except for the showcase MRD at Minsk in the Belorussian MD (figure 1). [redacted]

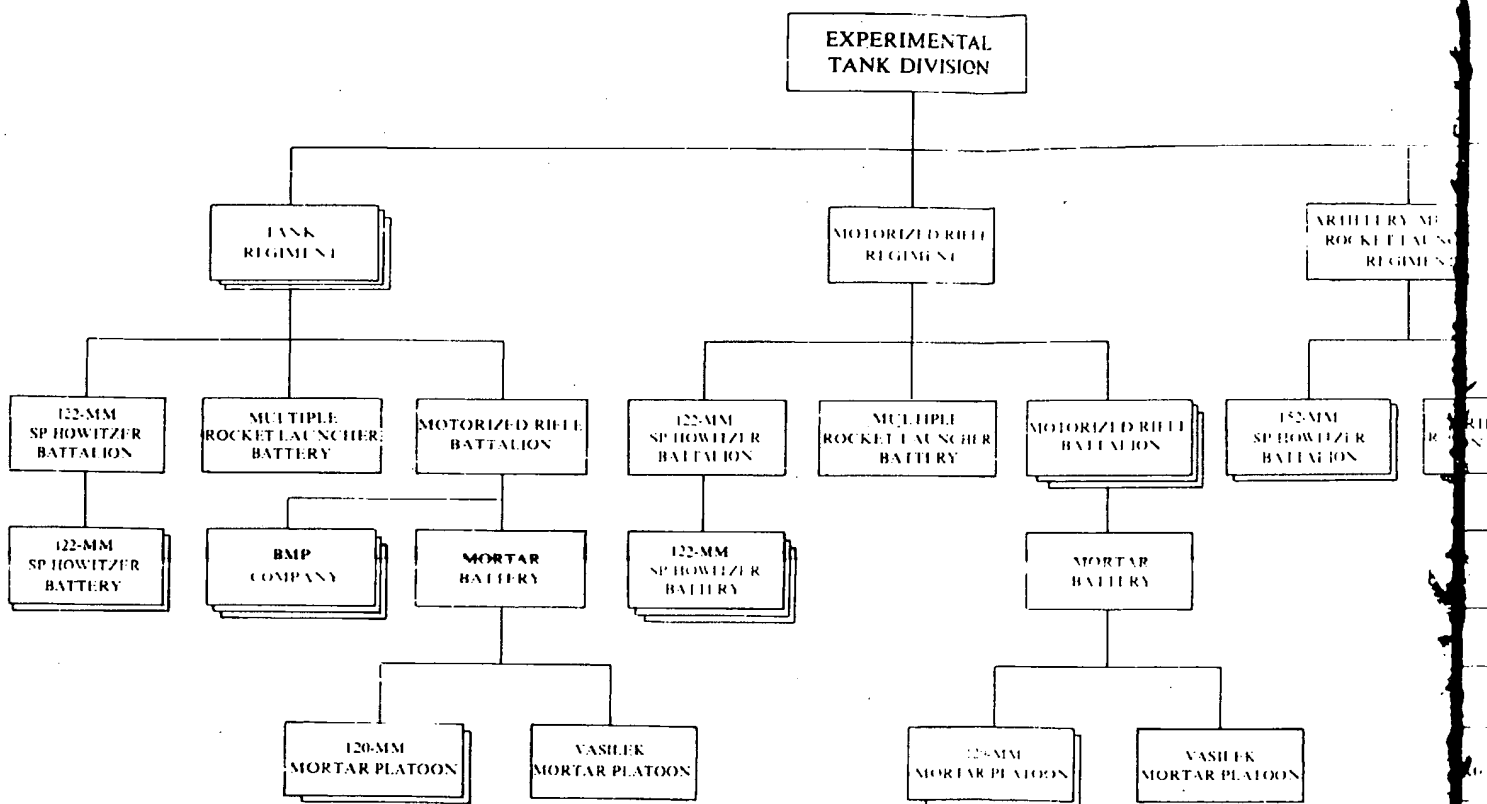
Maneuver Regiments. No changes [redacted] in the basic organizational structure of the three tank regiments in the experimental TDs since 1979. And, except for some slight modification in indirect fire artillery support, both MRRs that were formed in 1979 appear to be organizationally similar to other MRRs. (SNF Rel UK, Can, Aus, NZ)

Anomalies in equipment counts, parking patterns, training practices, and facilities at the two divisions indicate that the Soviets may have experimented with increasing the size of maneuver battalions to 40 tanks per tank battalion and about 40 APCs per motorized rifle battalion in these divisions. Normally, 31 tanks or APCs per battalion are [redacted] in Soviet tank or motorized rifle regiments, except for tank battalions subordinate to the MRR, which have 40 tanks. [redacted]

One tank regiment in the Ovruch division [redacted] with over 100 tanks in its regimental compound. Regiments that are converting to newer model tanks have been [redacted] with this many tanks: [redacted]

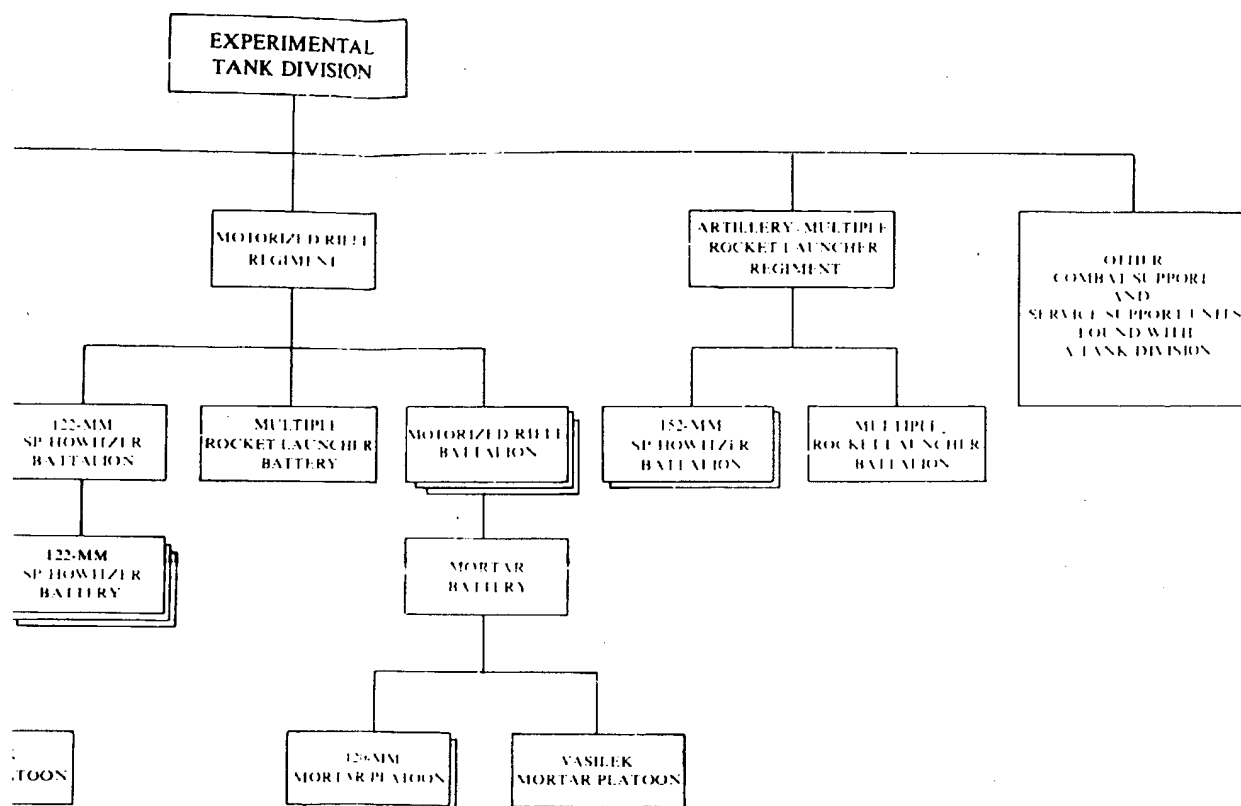
[redacted] In addition, modifications made to the two tank firing ranges at the Korosten training area, which is used by the Ovruch TD, indicate that there may have been four tanks per platoon, or 40 tanks per battalion. [redacted]

rather than the usual three [redacted]



Note:
Shaded areas indicate additional units or organizations.

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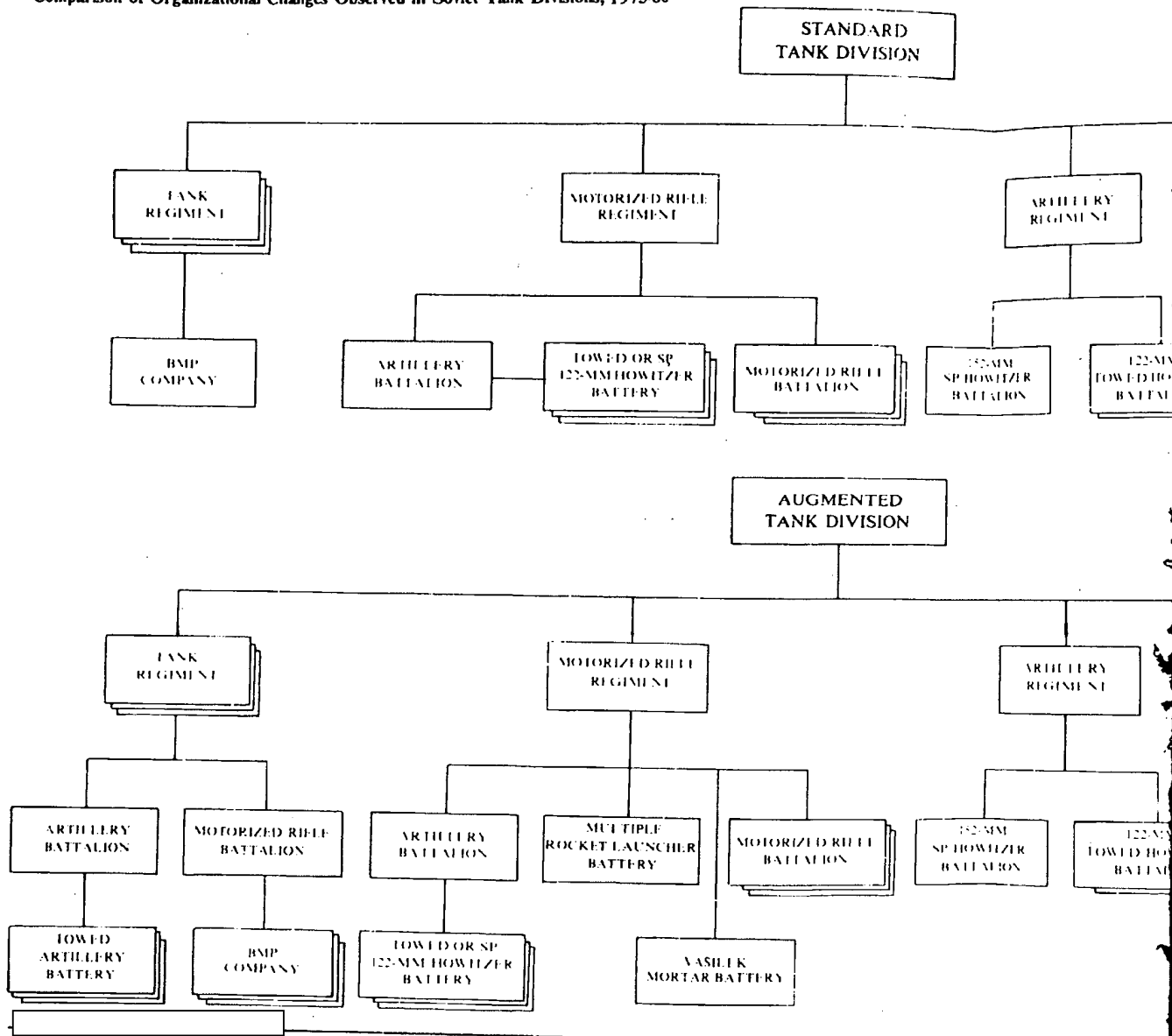
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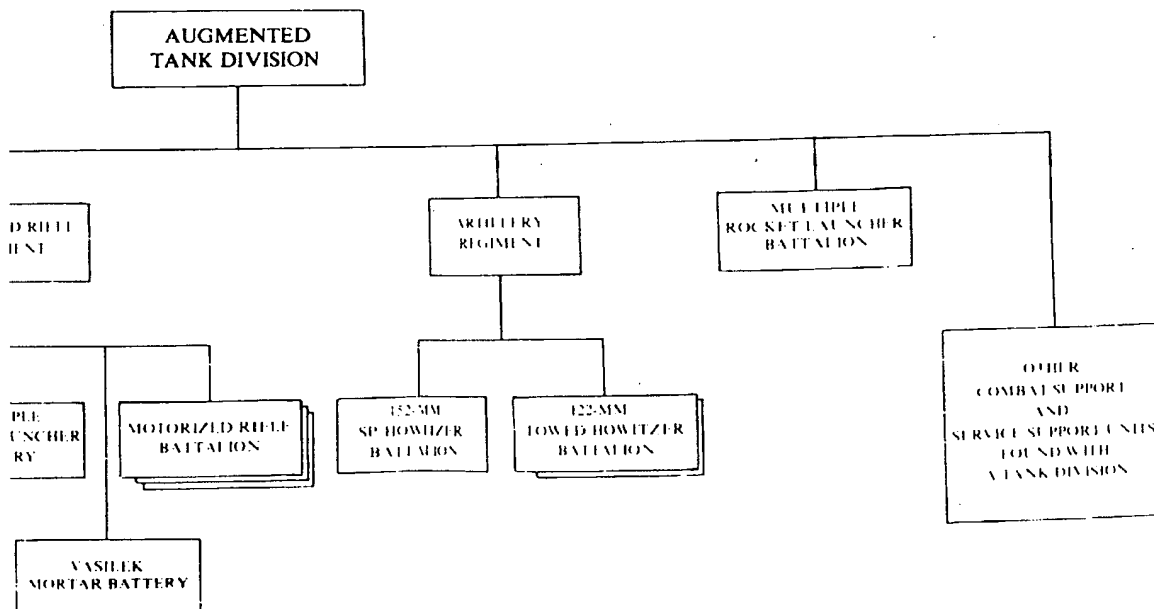
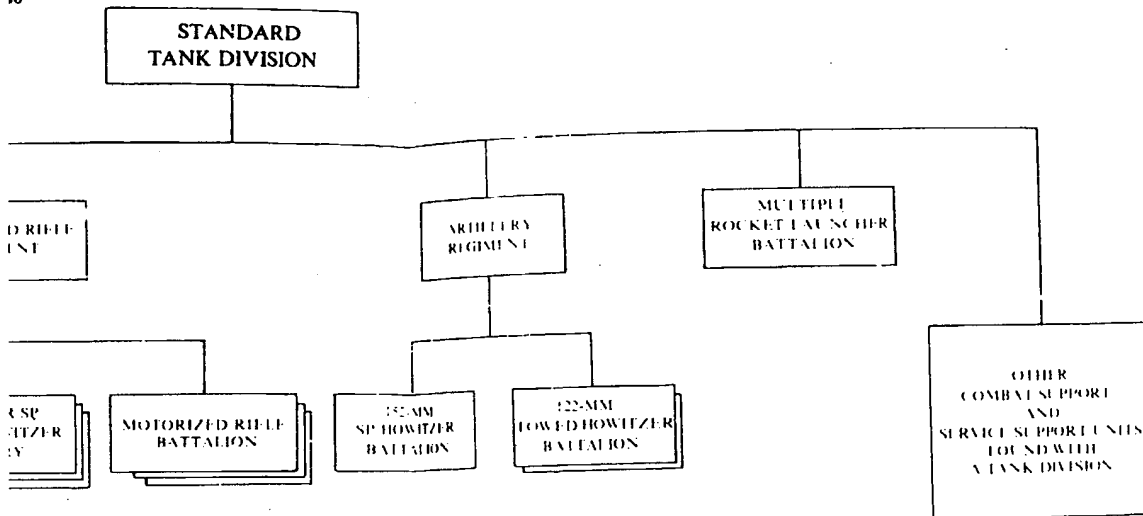
Shaded areas indicate additional units or alterations from standard 1975 tank division

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Figure 1

Comparison of Organizational Changes Observed in Soviet Tank Divisions, 1975-80





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[redacted] organized artillery regiments in the Groups of Forces in Germany. [redacted] Furthermore, an [redacted] has indicated that the artillery regiment of an MRD located in Kaliningrad also has a similar organizational structure. [redacted]

The air defense regiments of the Ovruch and Belogorsk TDs are equipped with surface-to-air missiles (SAMs). When originally formed, each TD contained a mixed SA-6/8 regiment, but during 1979 the regiments were changed to either SA-6s or SA-8s. The Belogorsk division is now equipped with SA-6 and the Ovruch division with SA-8 SAMs. [redacted]

It is likely that the modifications in the experimental TDs—the introduction of artillery and increased infantry support—required the Soviets to increase the logistics capability of these divisions. It appears that the motor transport battalion of the Belogorsk TD has been increased from three companies to four, and the number of cargo trucks per company has increased from 60 to 80. [redacted]

The structure of the signal battalion appears to be unchanged since it was initially reorganized in 1978. Additional command vehicles and the Twin Ear troposcatter systems are integral parts of the signal battalion. At Ovruch, the SS-21 tactical missile was introduced; however, other combat support and service support units and equipment are the same as those [redacted] with other TDs. [redacted]

The current organization and major items of equipment of the experimental TDs are presented in figure 2. [redacted]

Augmented Motorized Rifle and Tank Divisions

Modifications to Soviet motorized rifle and tank divisions occurred throughout the 1970s. In MRR-subordinate units, the increase of artillery in artillery battalions and of tanks in tank battalions was complete by 1975. Changes to divisional reconnaissance battalions [redacted] in 1976, when BMPs were introduced. In 1977, an MRI battery was added to the artillery assets of the tank and motorized rifle regiments. By 1979 these changes

[redacted] It appears that the Soviets at one time considered increasing the size of the TR from 94 to 120 tanks. Additionally, the number of BMPs in the MR battalions at both Ovruch and Belogorsk has consistently exceeded the standard 31 BMPs per battalion. This number does not include those BMPs associated with the reconnaissance company subordinate to the MRR. Thus, MR battalions in these divisions probably have a total of 40 BMP APCs. [redacted]

Combat Support and Service Support Units. The reconnaissance battalions in the experimental TDs appear to contain two companies equipped with a mix of BMPs and tanks. These companies may be replacing the scout car reconnaissance company and the light tank company. Each battalion is equipped with 15 BMPs, six medium tanks, and several BTR-60/70 APCs rather than PT-76 light tanks and BRDM scout cars. BRDMs have rarely been [redacted] in the reconnaissance battalions of the experimental TDs, and since 1976 the PT-76 light tank has been in the process of being phased out of all tank and motorized rifle divisions. [redacted]

Changes in the artillery regiment have mainly consisted of upgrading of equipment. The artillery regiment of the Belogorsk TD was originally equipped with one 122-mm and one 152-mm SP howitzer battalion, and a BM-21 multiple rocket launcher (MRI) battalion. During 1979 the 122-mm SP battalion was replaced with a second 152-mm SP battalion. [redacted]

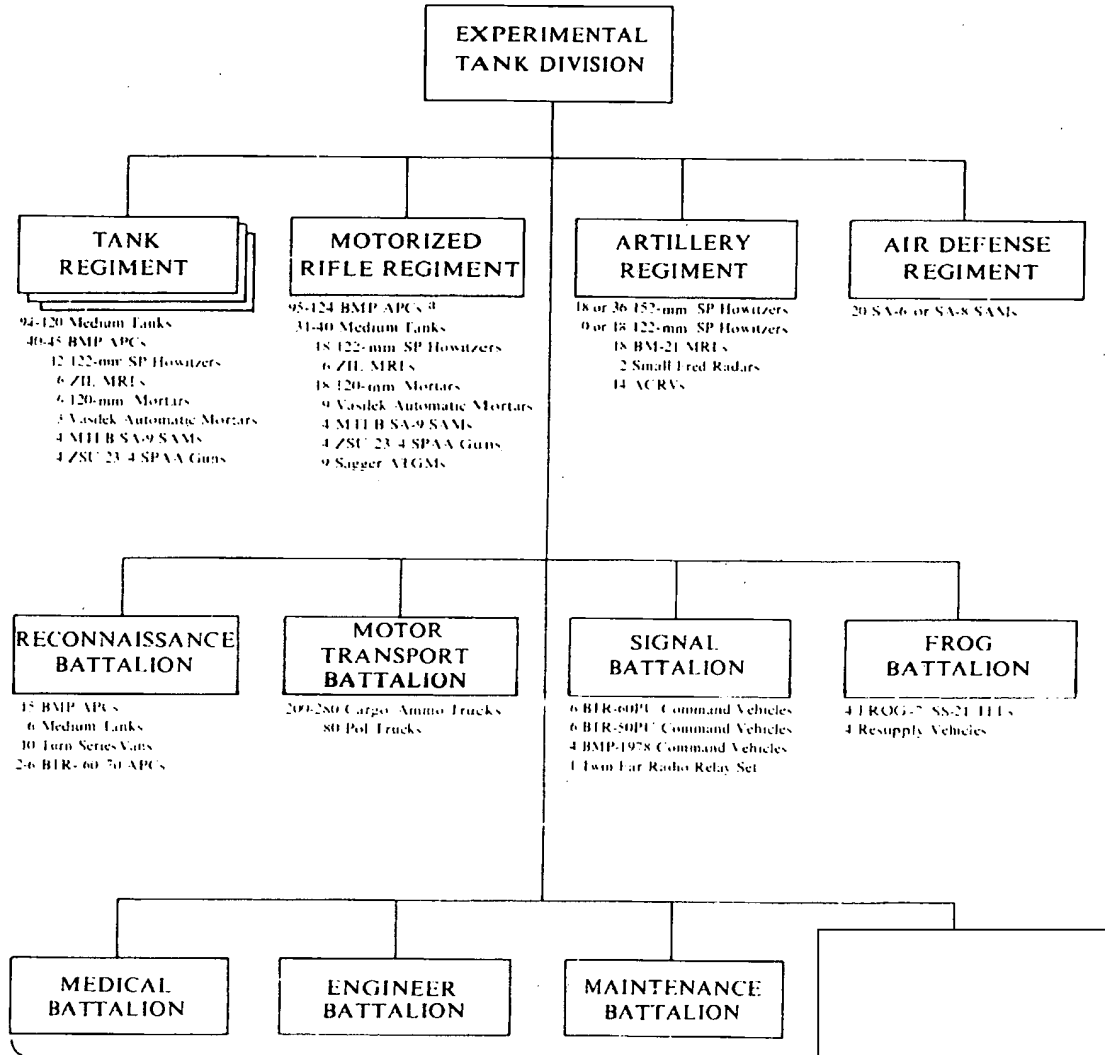
[redacted] we believe that the artillery regiment at Ovruch has the same structure as the one at Belogorsk. Until the summer of 1980 the experimental TDs were the only known Soviet divisions whose artillery regiments were structured this way. During the summer of 1980, however, [redacted] confirmed the existence of similarly

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Figure 2

Organization and Major Items of Equipment
in an Experimental Tank Division, Early 1980



^a Higher number of BMP APCs based on
at least 40 BMPs per maneuver battalion

^b Equipment same as found in standard tank division

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had been incorporated into the TO&E of standard motorized rifle and tank divisions. Additional changes similar to those in the experimental TDs and the Dauriya MRD [redacted] only since late 1979 in other MRDs and TDs. [redacted]

Maneuver Regiments. Modifications of motorized rifle and tank regiments have primarily involved indirect fire weapons and APCs. As of 1978 an MRL battery equipped with six MRLs had been identified in a number of MRRs and in at least two TRs subordinate to MRDs. Most of the regiments which had been confirmed with the MRLs are located along the Sino-Soviet border. Indirect fire capability has also been increased by the introduction of a battery of four Vasilek automatic mortars in MRRs along the Sino-Soviet border and also in Afghanistan.⁴ Also, a howitzer battalion has been added to the TRs. This battalion is equipped with either 18 towed 122-mm howitzers or 12 SP 122-

mm howitzers. In one instance, 18 towed 152-mm howitzers [redacted]

The size of the augmentation is best illustrated by comparing the number and types of indirect fire weapons available at regimental and divisional level in Soviet motorized rifle and tank divisions in 1975 and today (table 1). The addition of these weapons increased the total number of indirect fire weapons in some MRDs from 180 to 234. In some TDs the number increased by over 50 percent—from 108 to 172. Within this five-year period the Soviets have increased the number of indirect fire weapons in some regiments by about one-third in the MRDs and more than doubled it in the TDs. In addition, many of the 122-mm howitzers with the MRDs are now self-propelled, and thus have increased capabilities over their towed predecessors. Because many of the weapons with the TRs are still towed models, they may prove to be too cumbersome for the fast-moving tank regiment and may eventually be replaced by more mobile weapons, especially in DIA category I and II divisions. [redacted]

⁴Recent evidence [redacted] indicates that [redacted] is being restructured to the motorized rifle battalion. Each battalion is receiving a platoon of three Vasilek mortar [redacted]

Table 1

Indirect Fire Weapons at Divisional and Regimental Levels in Soviet MRDs and TDs, 1975 and 1980

		Divisional Level			Regimental Level			Regimental Total	Total
		122-152mm Howitzers (Towed & SP)	MRLs	120-mm Mortars	Vasilek Mortars	122-152mm Howitzers (Towed & SP)	MRLs		
Standard Motorized Rifle Division	1975	54	18	54	0	54	0	108	180
Augmented Motorized Rifle Division	1980	54	18	54	12	66-72	18-24	150-162	222-234
Standard Tank Division	1975	54	18	18	0	18	0	36	108
Augmented Tank Division	1980	36-54	18	18	4	72	6	100	154-172
Experimental Tank Division	1980	36	18	36	18	54	42	150	208

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Changes involving APCs have been [] in motorized rifle and tank regiments. In 1978 [] evidence that several MRRs had as many as 115 to 120 BTR-60/70 APCs assigned to them. This is 20 to 30 more APCs than indicated for BTR-60/70-equipped MRRs in the most recently published [] organizational guide. [] The increased number of APCs per regiment may be necessary to provide additional transport for small weapons such as the RPG-7 antitank grenade launcher, AGS-17 grenade launcher, and 82-mm mortar. []

It appears that the number of BMPs is also being increased in the MRRs. This was evidenced during the past year, when almost an entire BMP-equipped MRR of the MRD at Dauriya was [] in unit formation. The total number of BMPs observed in the MRR consistently exceeded 31 per battalion, and at least 40 BMPs per battalion were [] on more than one occasion. These [] larger-than-expected numbers of BMPs are important because Dauriya was the first MRD to be identified with artillery in its tank regiment, medium tanks in its reconnaissance battalion, and rocket launchers in its MRRs. It was also one of the divisions that experimented with mixed SA-6/8 air defense regiments. []

Also, the introduction of a BMP battalion to each tank regiment resulted in a further increase in the number of APCs in augmented TDs and MRDs. Formerly, a Soviet TR subordinate to a TD had only one company of 10 BMPs; and a TR subordinate to a MRD had no BMPs. [] indicates that a MR battalion with 30 to 40 BMPs is being added to TRs. This would provide as many as 90 additional BMPs for TDs and about 40 for MRDs. []

Combat Support and Service Support Units. Changes in divisional combat support and service support units appear to be confined to the reconnaissance battalion. Prior to 1975 a Soviet divisional reconnaissance battalion consisted of five subordinate companies—headquarters and services company, light tank company, scout car reconnaissance company, long-range reconnaissance company, and radio/radar reconnaissance company (figure 3). Be-

ginning in 1976 it appeared that 15 BMPs, organized into a company, were replacing the light tank company. Within the past two years, at least six medium tanks have been identified in the reconnaissance battalion of several tank and motorized rifle divisions. In at least one division []

[] indicate that in the future the reconnaissance battalion may be organized and equipped as shown in figure 3. []

Other divisional support units have undergone equipment modernization but, for the most part, appear to have maintained the standard organizational structure. During 1977 and 1978, air defense regiments in several divisions experimented with a mix of SA-6 and SA-8 SAMs; however, these regiments now appear to be equipped with either SA-6s or SA-8s. A minor change has also [] in artillery regiments subordinate to TDs. Formerly, these artillery regiments were equipped with 122-mm towed howitzers; however, several TDs have been identified recently with a battalion of 152-mm SP guns which replaced a towed 122-mm howitzer battalion. []

Although the changes observed in the augmented and experimental TDs are very similar, it appears that the experimental divisions are better equipped. An examination of the weapons holdings indicates that the experimental TDs have at least as many tanks as both the standard and augmented TDs (table 2). Also, the experimental divisions have as many or more BMPs and greater numbers of the more modern and mobile indirect fire weapons—self-propelled artillery, MRIs, and Vasilek mortars. This mix of modern weapons in the experimental TDs gives them a better capability to overcome antitank defenses, as well as improved mobility. []

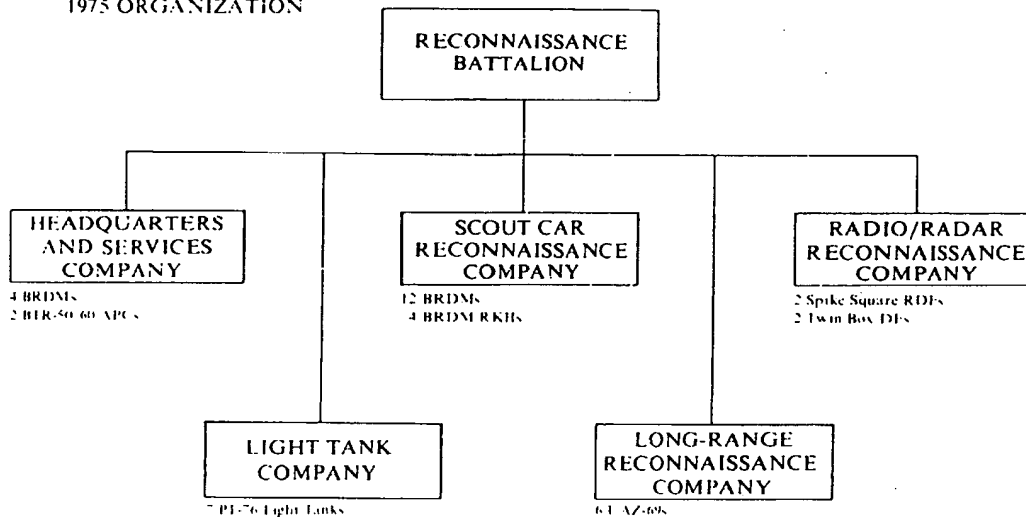
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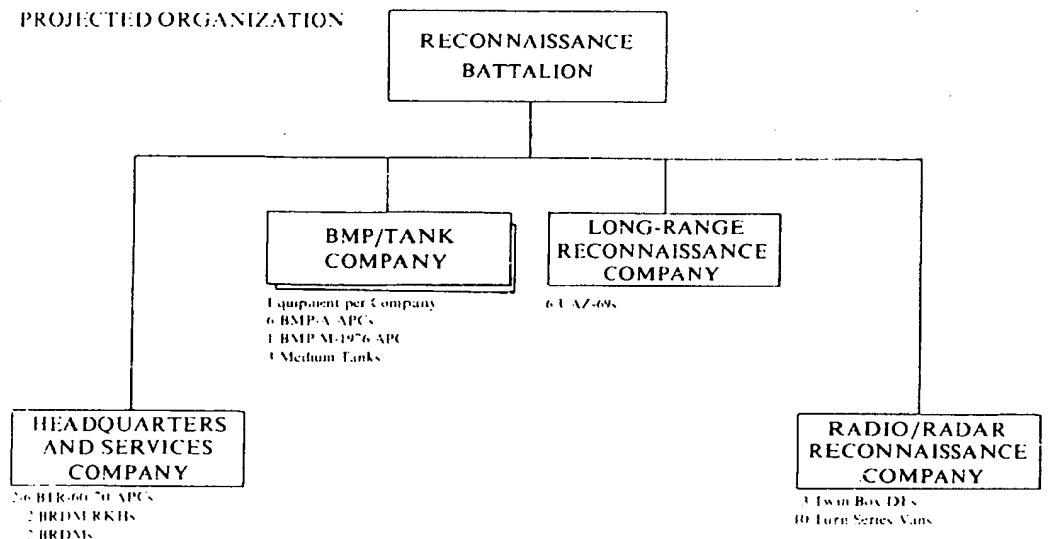
Figure 3

Changes in Major Equipment Organization
of the Divisional Reconnaissance Battalion

1975 ORGANIZATION



PROJECTED ORGANIZATION



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Weapons and Manpower Comparisons

The modifications that have been discussed appear to be quite extensive, and their effect on manpower requirements for Soviet divisions varies between tank and motorized rifle divisions. In 1975 a fully manned MRD was estimated to require about 12,470 men and a fully manned TD about 9,770.

☐ MRDs incorporating these changes now need approximately 300 additional personnel—a 2 to 3 percent increase—and TDs about 1,300—an approximately 13 percent increase. This is based on the assumption that other divisional subordinates are not reduced. These figures are for an MRD or TD that is equipped with T-64/72 medium tanks that require only three crew members rather than the four needed for T-54/55/62 tanks.⁵ Because of this

Information received since the information cut-off date for this publication indicates that the Soviets may plan to man the T-72 medium tank with four crewmen rather than three as with the T-64 tank. There is no confirmation of this ☐ if true, it would obviously affect Soviet manpower requirements ☐

manning difference in tank models, when a full-strength standard TD is reequipped with T-64/72 medium tanks, it will have an excess of about 300 personnel compared to its T-54/55/62-equipped counterparts. When a full-strength standard MRD is similarly reequipped, it will have about 200 excess personnel. ☐

An examination of the experimental TDs indicates that even though these divisions have more indirect fire artillery pieces than augmented TDs (186 to 172), manpower requirements are about the same for both. Combining the divisional MRI, battalion and artillery regiment to form a mixed artillery and MRI regiment has eliminated personnel requirements at division level for one headquarters, firing battalion, and resupply company. These personnel are then available for use at the regimental level. ☐

Table 2

Comparison of Major Combat Weapons in Standard, Augmented, and Experimental Tank Divisions

	Medium Tanks	BMP APCs (in Maneuver Units)	SP Artillery	Towed Artillery	Mortars (120-mm and Vassilks)	MRIs
Standard Tank Division	320	124	36	36	18	18
Augmented Tank Division	320	124-186	36	90	22	24
Experimental Tank Division	320-400	186-240	90	0	34	60

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References

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